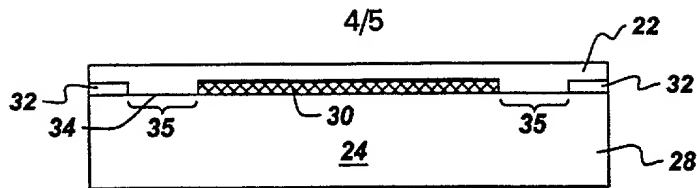


**Fig. 2**

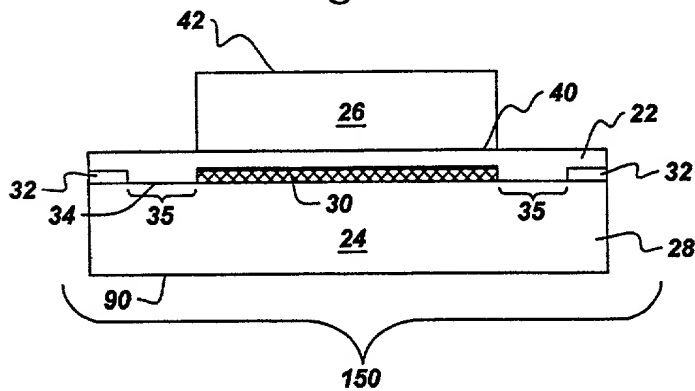
Alternate Lamination Materials

Lamination material	Solvent	Solvent Drive Off Temp/Time	Bonding Temp/Time	Etch Methods	Comment
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Benzocyclobutene (BCB)	mesitylene	~150° C / ~30'	~200 - 210° C / 60'	CF <sub>4</sub> /O <sub>2</sub> plasma, excimer laser	Thermoset. TCE ~50 ppm/C
Ultem® Benzoflex S-552	anisole	~150° C / ~30'	~200 - 220° C / 60'	O <sub>2</sub> plasma, excimer laser	Thermoplastic TCE ~50 ppm/C
Photodefinable BCB	mesitylene	~150° C / ~30'	~200 - 210° C / 60'	Expose to actinic radiation, then wet etch after solvent drive off	Thermoset.
Epoxies with latent heat catalysts	ketones	not required	~150-200° C / 60'	O <sub>2</sub> plasma, excimer laser	Thermoset. TCE ~50 ppm/C
Polyesters	ketones anisole	~150° C / ~30'	~150° C / 60'	O <sub>2</sub> plasma, excimer laser	thermoplastic
Acrylics	toluene mesitylene	~150° C / ~30'	~200 - 210° C / 60'	O <sub>2</sub> plasma, excimer laser	thermoplastic

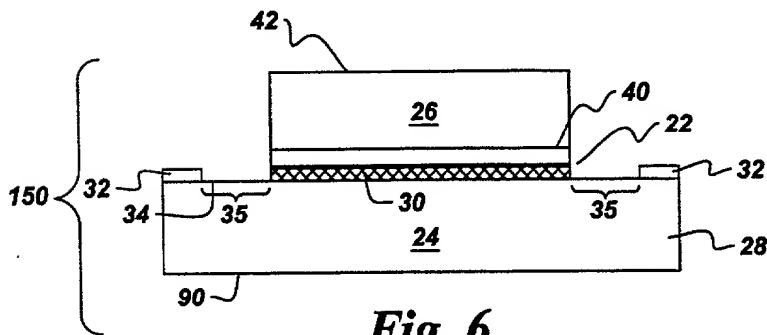
Fig. 3



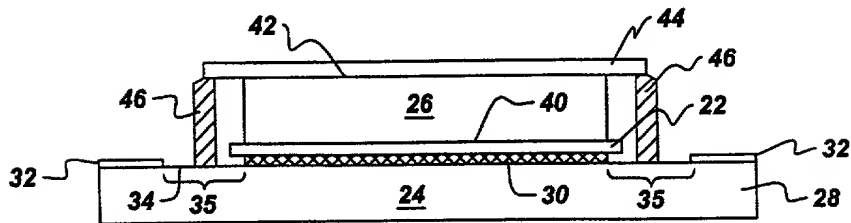
**Fig. 4**



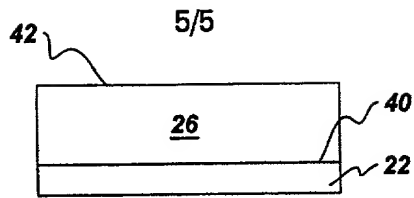
**Fig. 5**



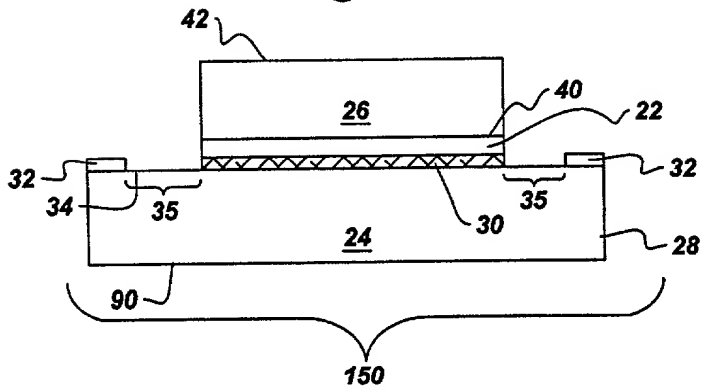
**Fig. 6**



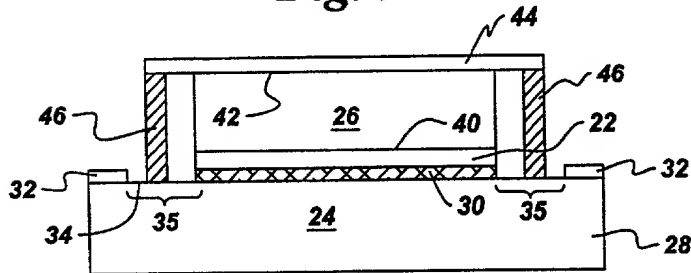
**Fig. 7**



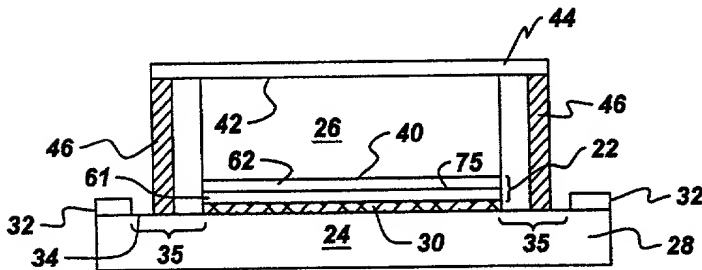
**Fig. 8**



**Fig. 9**



**Fig. 10**



**Fig. 11**